

bond's market value caused by an equal change in interest rates. The amount of bond being hedged will vary monthly to compensate for the differences in swap and bond valuation drivers.

The goal is to establish the hedge such that an interest rate change has a similar dollar impact on the swap MTM value and the bond market value. This is best expressed as the dollar value per basis point. Sour hedging examples are summarized in the next chart. The detailed calculations are in the exhibit titled "Compensatory Ratio Analysis".

	210	120 1
	Value of 1 BP	Value of 1 BP
	At Initial Date	With 12 Months Remaining
Exhibit 1		
4 year Swap	\$36,125	\$ 9,730
4 year Bond	\$36,185	\$ 9,734
Exhibit 2		
5 year Swap	\$46,546	\$ 9,726
7 year Bond	\$65,181	\$27,313
Exhibit 3		
6 year Swap	\$56,887	\$ 9,726
8 year Bond	\$64,013	\$23,052
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Exhibit 4 7 year Swap 10 year Bond

\$54,921 \$71,574 \$ 9,653 \$36,005

Hedge Ratio (Bond amount being hedged as a percentage of the swap notional amount):

	At Initial Date	With 12 Months Remaining
Exhibit 1	99.8% (\$36,125 / \$36,185)	100.0% (\$9,730 / \$9,734)
Exhibit 2	71.4% (\$46,546 / \$65,181)	35.6% (\$27,313 / \$9,726)
Exhibit 3	88.9% (\$56,887 / \$64,013)	42.2% (\$9,726 / \$23,052)
Exhibit 4	76.7% (\$54,921 / \$71,574)	26.8% (\$9,653 / \$36,005)

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The hedge ratios are logical. An interest rate change has a greater dollar impact on a longer maturity bond. So a lesser bond notional amount can be hedged by a given swap amount when the bond maturity is longer.

At the "hitial date", we can use the hedge ratios to determine the bond notional being hedged. For example, a \$100 million swap in Exhibit 3 would hedge \$88.9 million bond notional. This should generate a "perfect" matching of swap and bond value volatility.

However, note the changing relationship when there is a maturity mismatch. Exhibit 2 shows an initially moderate mismatch (7 year bond versus 5 year swap gives a maturity ratio of 1.4 to 1). By the end of year 4, the maturity mismatch is wide (3 year bond versus a 1 year swap gives a maturity ratio of 3 to 1). We therefore need to vary the percentage hedging relationship between the bond and swap to maintain similar amounts

EXHIBIT I DETALS

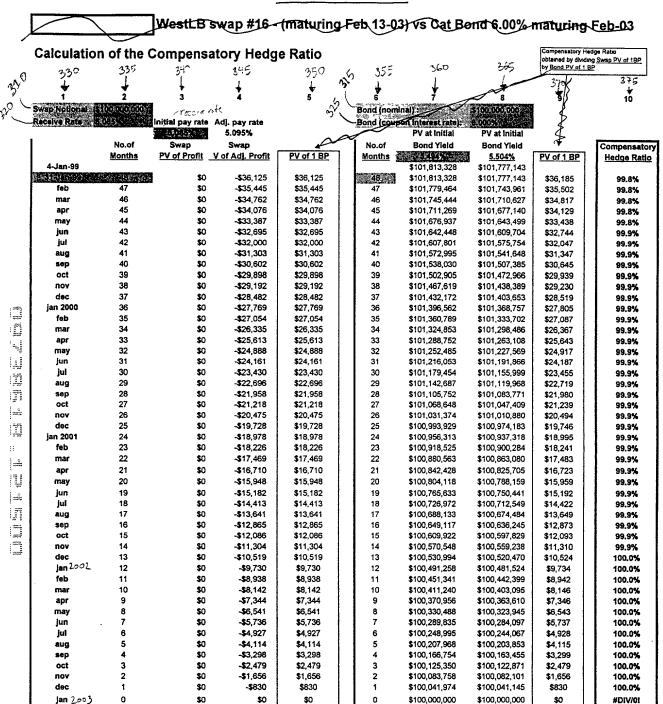


FIG. 3

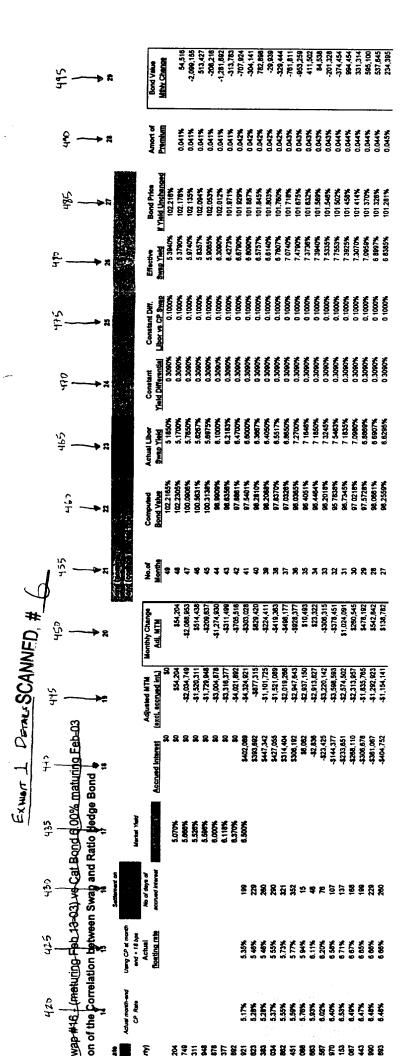


FIG 4

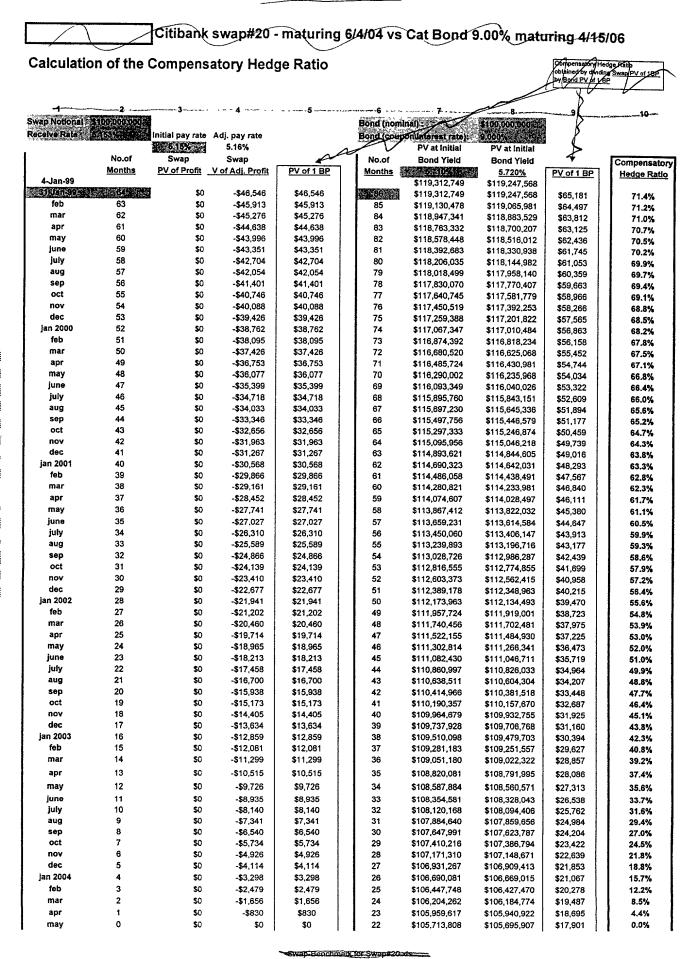


FIG6

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p#20 - mathring-6/4/04 vs-Caf Bond-9.00% maturing 4/15/06 of the Correlation between Swap and Ratio Hedge Bond

	Bond Value	Mthly Change	\$93,236	-\$3,937,361	\$367,259	-\$299,915	-42,271,256	-\$664,397	-\$1,420,017	-\$561,230	\$1,163,790	\$387,414	4540,793	-\$1,479,432	-\$2,039,216	\$645,187	\$652,614	-\$541,433	41,066,100	\$2,058,742	\$330,892	\$1,286,669	\$837,482	\$224,176		
	Amort of	Premium	0.188%	0 189%	0.190%	0.191%	0 192%	0.193%	0.194%	0 195%	0 185%	0 196%	0 197%	0.198%	0 199%	0.200%	0 201%	0.202%	0.203%	0 204%	0.205%	0.206%	0.207%	0.208%		
	Bond Price	Yield Unchanged	119 967%	119 778%	119 588%	119 397%	119.205%	119 012%	118 819%	118 624%	118 429%	118 232%	116 035%	117 837%	117 638%	117.438%	117.237%	117 035%	116 832%	116 628%	116 423%	116 218%	116 011%	115 ACC 94		
	Effective	Swap Yield # Yield	5 5958%	6.2136%	6.1606%	6.2158%	6.6025%	6.7658%	7 0291%	7,1466%	6.9533%	6.8967%	7,0141%	7 3108%	7.7296%	7 6280%	7.5233%	7 6579%	7 9062%	7 5073%	7 4641%	7.2196%	7 0863%	7 0308%		
	Constant Diff.	Libor vs CP Swap	2000 O	0.1000%	0.1000%	0 1000%	0 1000%	0 1000%	0 1000%	7000%	0 1000%	4000t 0	0.1000%	0.1000%	0 1000%	0 1000%	0 1000%	A0001 0	70004	0 1000%	%0001.0	90000	0 1000%	9 40006	20010	
	Constant	Yield Differential Libor vs (0.4008%	7,000	70000	0.4008%	0.4008%	0.4008%	7008%	0.4008%	0.4008%	0.4008%	0.4008%	70000	0.4008%	0.4008%	0.4008%	7,000,0	0.4008%	0.4008%	0.4008%	7000 C	0.4008%	20000	4 .000+ 0	
	Actual Libor	Swap Yield	5.3082%	8.0002.G	2.812076 F. 86000K	3,000078	5.815038	0.301778	6.400.0	8.787/G	0.0400 W	0.652578	ELB / BCO	7.01008	7.0000.7	7.42007	# 7176' I	MC777 /	#1/00/	A PODG T	7 4494	M 2007	POR RO	0./0037	6.7368%	
	Comorrised	Bond Value	120 155%	120.080%	KACK CIT	4111.011	115.620%	47,CT.211	112.00078	110 400%	401/301	110 6/9%	40/8 OT	4251 UT1	106 454%	4917901	4 100.001	4511 /01	106 369%	4080 cot	100.805%	48/0 /Ot	4001 BOT	106./81%	108.808%	
	1	Months	20	8 1	2	3 :	3 :	23 1	ia 1	8	2	2	:	1 2 }	۲ :	2	P :	2	Ε.	2 :	8	8	67	8	æ	
		Monthly Change Adi. MTM		\$100,130	42,735,407	\$388,471	-\$207,898	41,678,464	-\$543,403	-\$639,737	-\$55,484	\$591,855	\$1,510	-\$539,258							\$1,131,546	\$252,785	\$332,224	\$1,075,368	\$120,323	
!	L	Adjusted MTM (excl. accrued int.)	2	\$100,130	-\$2,635,277	-\$2,246,806	-\$2,454,704	-44, 133, 168	176,676,571	-\$5,616,308	-\$5,671,792	-\$5,079,937	-\$731,069	-\$1,270,327	-\$2,230,553	-\$3,573,319	43,070,315	-\$2,828,735	-\$3,295,477	-\$3,789,204	-\$2,657,658	-\$2,404,873	-\$2,072,649	-\$997,281	-\$876,957	
		Accrued interest	Q	2	8	8	8	8	ន	2	2	\$279,579	\$355,069	\$387,327	\$10,553	\$68,319	_		\$52,477	-\$121,796	-\$27,342			\$107.719	-\$133,043	
	Market Yield			5 131%	5.735%	\$ 655%	5.710%	6.114%	6.260%	6.510%	6.545%	6.415%	6.426%	6 539%	to be a second blocked	Hypothetical Market	Tield Course (Vistamon Vis	Source (misurated for the	on the management of the	le 3vr + 5 months	Substract 10bo -	off between Libor & CP				
Settlement on		No of days of										118	9	178	17	: 38	28	=======================================	747	5	8	5	25	3	<u> </u>	
in a month	and + 18 bps	Actual	MACHINE INC.									74.74	2 46%	2 S	A 19%	****	70.5	2 7	8 20K	7.05 W	8.71%	8 67%	200		6 80 8 80 8 80 8 80 8 80 8 80 8 80 8 80	
	CP Rate											300	147C	207C	200	8.00°	200	# 0//G	8 28 C	6.00	200			£	6.45% A.65%	

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	34	26	26		17		97		
			×	avera. X	>	. Ineffective	Square of	Square of	
	:		Para Posteri	I fe to date	Swap MTM	Portion of	Total Deviation	Unexplained Dev	2
	Bond Value	Compensatory Hedge Ratio	MTM mthly change	Hedged Bond	Mthly Change	Swap nith	SST	(ineffect.portion)	
	MILIN CHARLE	200		MTM mthly change		(26-27)		\$ <u>\$</u> \$	
		į	0	20.00	£100 130		1,125,500,380	1,125,500,380	%0.0
31~Jan-99	\$83,236	71 4%	190,00	100,00	#100,100 #100,100		4 025 232 445 753	4.547.326.165	%6:66
feb	-\$3,937,361	71 2%	-2,802,841	061,868,1-	104,667,24-	104'10'	201021221221220	16 355 526 950	%9.66
F	\$367,259	71.0%	260,582	-825,226	\$388,471	-127,889	5,878,134,380,842	000,000,000,01	769 00
	4299 915	70.7%	-212,080	-671,939	-\$207,898	4,182	6,193,793,295,468	17,487,243	K 0.98
id a	-4230,010	70.5%	-1 600 458	-857,643	-\$1,678,464	28,006	7,092,041,292,889	6,085,001,860	%9.66 6
шаў	CC2,172,24-	10.0%	986 0C8-	-818.192	-\$543,403	1, -77,533	7,163,098,675,738	6,011,434,058	85.66
inne	1884,397	70.2%	976 200		-\$939.737		7,187,803,185,810	2,863,479,409	99.5%
ĮĮ.	-\$1,420,017	%8.80 %E.09	-391,029		-\$55,484	•	7,712,471,054,324	112,590,834,588	98.1%
âne	-\$561,230	08.7%	807,578		\$591.855		9,186,612,967,291	46,536,465,790	92.9%
seb	\$1,163,790		902,790		\$1.510		9,458,524,677,896	70,861,235,761	97.2%
ö	\$387,414		901,102		850 0588		9,457,538,409,593	27,952,112,745	%6'96
NOV	-\$540,793	68.8%	800'Z/S-		900 0904		9 642 759 864 005	2.812.482.288	%6'96
qec	-\$1,479,432		-1,013,259		-4900,220		10 225 944 833 831	2.240.612.832	97.1%
ian 2000	-\$2,039,216	68 2%	-1,390,101	088,418-	-41,342,700		10,220,041,000,001	4 260 672 707	07.3%
ep Gp	\$645,187		437,669	-539,707	\$503,004		11,3/5,/13,533,491	4,600,013,131	07.1%
ב ב ב	\$652,614		440,464	-474,363	\$241,579		11,930,000,027,966	39,555,135,360	07.1.70
an	-\$541,433		-363,499	-467,434	-\$466,742		11,931,561,210,070	10,659,017,636	% 9 9 9 0
i e	-\$1 068 100		-713,151	481,888	-\$493,727	•	11,930,306,132,838	48,145,532,916	2000
	CA 7 050 7.42	66.4%	1,366,732	-379,186	\$1,131,546	5 235,186	14,380,521,583,999	55,312,409,466	80.0%
nue	2#/'000'7 #		218 364		\$252,785	5 -34,424	14,770,252,110,514	1,185,000,888	%6.96 ———————————————————————————————————
<u>al</u>	\$330,882		C0,014			4 511,605	15,239,874,204,598	261,739,328,750	95.3%
and	\$1,286,669		445 688		•	•	17,076,067,269,470	280,561,006,573	94.1%
sep	\$837,482		345,000		\$120.323		17,210,457,519,916	613,024,982	94.2%
ö	\$224,176	64.7%	500,041						•

EXHIBIT 3 DETAILS

alculatio	n of the C	compensa	tory Hedge	Ratio				Compensatory Hero optamed by synchry by Song PV of USE	e Ration
		1							1 ₀
ap Notional	100 (100) 100 (100)		Adj. pay rate	·	Bond (nomin		You control of the second of t	<i>f</i>	
	N4	Swap	5.175% Swap	سيمسيد	No.of	Bond Yield	Bond Yield	+	Compensato
	No.of Months		V of Adj. Profit	PV of 1 BP		SPARILY OF	<u>6.195%</u>	PV of 1 BP	Hedge Ratio
04-Jan-99	<u></u>					\$98,806,923	\$98.742,910		
SHOKERN			-\$56,887	\$56,887		\$98,806,923 \$98,816,190	\$98,742,910 \$98,752,670	\$64,013 \$63,520	88.9% 88.6%
feb	80	\$0	-\$56,299	\$56,299 \$55,708	98 97	\$98,825,505	\$98,762,480	\$63,025	88.4%
mar	79 70	\$0 \$0	-\$55,708 -\$55,114	\$55,114	96	\$98,834,868	\$98,772,342	\$62,526	88.1%
apr	78 77	\$0 \$0	-\$54,518	\$54,518	95	\$98,844,280	\$98,782,254	\$62,026	87.9%
may jun	76	\$0	-\$53,919	\$53,919	94	\$98,853,740	\$98,792,217	\$61,522	87.6%
jui	75	\$0	-\$53,318	\$53,318	93	\$98,863,248	\$98,802,232	\$61,016	87.4%
aug	74	\$0	-\$52,714	\$52,714	92	\$98,872,806	\$98,812,299	\$60,507	87.1%
sep	73	\$0	-\$52,108	\$52,108	91	\$98,882,413	\$98,822,417	\$59,995	86.9%
oct	72	\$0	-\$51,499	\$51,499	90	\$98,892,069	\$98,832,588	\$59,481	86.6%
nov	71	\$0	-\$50,887	\$50,887	89	\$98,901,775	\$98,842,811	\$58,964 \$58,444	86.3% 86.0%
dec	70	\$0	-\$50,273	\$50,273	88	\$98,911,532 \$98,931,338	\$98,853,087 \$98,863,416	\$58,444 \$57,922	85.7%
jan 2000	69	\$0	-\$49,656	\$49,656	87 86	\$98,921,338 \$98,931,195	\$98,873,799	\$57,397 \$57,397	85.4%
feb	68	\$0	-\$49,036 \$48,414	\$49,036 \$48,414	85 85	\$98,941,103	\$98,884,235	\$56,868	85.1%
mar	67	\$0 \$0	-\$48,414 -\$47,789	\$47,789	84	\$98,951,062	\$98,894,725	\$56,337	84.8%
apr	66	\$0 \$0	-\$47,161	\$47,161	83	\$98,961,072	\$98,905,269	\$55,804	84.5%
may	65 64	\$0 \$0	-\$46,531	\$46,531	82	\$98,971,134	\$98,915,867	\$55,267	84.2%
jun	63	\$0	-\$45,898	\$45,898	81	\$98,981,248	\$98,926,520	\$54,728	83.9%
jul aug	62	\$0	-\$45,262	\$45,262	80	\$98,991,414	\$98,937,228	\$54,185	83.5%
sep	61	\$0	-\$44,624	\$44.624	79	\$99,001,632	\$98,947,992	\$53,640	83.2%
oct	60	\$0	-\$43,983	\$43,983	78	\$99,011,903	\$98,958,811	\$53,092	82.8%
nov	59	\$0	-\$43,338	\$43,338	77	\$99,022,227	\$98,969,686	\$52,541	82.5%
dec	58	\$0	-\$4 2,692	\$42,692	76	\$99,032,604	\$98,980,617	\$51,987	82.1% 81.7%
jan 2001	57	\$0	-\$42,042	\$42,042	75	\$99,043,034	\$98,991,604	\$51,430 \$50,870	81.4%
feb	56	\$0	-\$41,390	\$41,390	74	\$99,053,519	\$99,002,648 \$99,013,749	\$50,308	81.0%
mar	55	\$0	-\$40,735	\$40,735	73	\$99,064,057	\$99,024,908	\$49,742	80.6%
apr	54	\$0	-\$40,077	\$40,077	72	\$99,074,650	\$99,036,124	\$49,173	80.2%
may	53	\$0	-\$39,416	\$39,416	71 70	\$99,085,297 \$99,095,999	\$99,047,398	\$48,601	79.7%
jun	52	\$0	-\$38,752	\$38,752 \$38,085	69	\$99,106,756	\$99,058,730	\$48,026	79.3%
jul	51	\$0	-\$38,085	\$38,085 \$37,416	68	\$99,117,569	\$99,070,121	\$47,448	78.9%
aug	50	\$0 \$0	-\$37,416 -\$36,744	\$36,744	67	\$99,128,438	\$99,081,570	\$46,867	78.4%
sep	49	\$0 \$0	-\$36,069	\$36,069	66	\$99,139,362	\$99,093,079	\$46,283	77.9%
oct	48 47	\$0	-\$35,391	\$35,391	65	\$99,150,343	\$99,104,647	\$45,696	77.4%
nov dec	46	\$0	-\$34,710	\$34,710	64	\$99,161,380	\$99,116,275	\$45,105	77.0%
jan 2002	45	\$0	-\$34,026	\$34,026	63	\$99,172,474	\$99,127,962	\$44,512	76.4%
feb	44	\$0	-\$33,339	\$33,339	62	\$99,183,626	\$99,139,711	\$43,915	75.9%
mar	43	\$0	-\$32,649	\$32,649	61	\$99,194,835	\$99,151,519	\$43,316	75.4%
apr	42	\$0	-\$31,956	\$31,956	60	\$99,206,102	\$99,163,389	\$42,713	74.8% 74.2%
may	41	\$0	-\$31,260	\$31,260	59	\$99,217,426	\$99,175,320	\$42,106 \$41,497	73.6%
jun	40	\$0	-\$30,561	\$30,561	58 57	\$99,228,810 \$99,240,251	\$99,187,313 \$99,199,367	\$40,884	73.0%
jul	39	\$0	-\$29,860	\$29,860	57 56	\$99,240,251 \$99,251,752	\$99,199,367	\$40,268	72.4%
aug	38	\$0 \$0	-\$29,155 -\$28,447	\$29,155 \$28,447	55	\$99,263,312	\$99,223,663	\$39,649	71.7%
sep	37 36	\$0 \$0	-\$25,447 - \$ 27,736	\$27,736	54	\$99,274,932	\$99,235,905	\$39,027	71.1%
oct	36 35	\$0 \$0	-\$27,022	\$27,022	53	\$99,286,611	\$99,248,211	\$38,401	70.4%
nov dec	34	\$0		\$26,305	52	\$99,298,351	\$99,260,580	\$37,772	69.6%
jan	33	\$0		\$25,585	51	\$99,310,151	\$99,273,012	\$37,139	68.9%
feb	32	\$0		\$24,862	50	\$99,322,012	\$99,285,509	\$36,503	68.1%
mar	31	- \$0	-\$24,136	\$24,136	49	\$99,333,935	\$99,298,071	\$35,864	67.3%
apr	30	\$0	-\$23,406	\$23,406	48	\$99,345,918	\$99,310,697	\$35,221	66.5%
	29	\$0		\$22,673	47	\$99,357,964	\$99,323,388	\$34,575	65.6%
may		\$0		\$21,938	46	\$99,370,071	\$99,336,145	\$33,926	64.7%
jun iul	28 27	\$0 \$0		\$21,199	45	\$99,382,241	\$99,348,968	\$33,273	63.7%
jul aug	27 26	\$0		\$20,457	44	\$99,394,474	\$99,361,857	\$32,616	62.7%
aug	25	so		\$19,711	43	\$99,406,769	\$99,374,813	\$31,957	61.7%
sep	25	\$0		\$18,963	42	\$99,419,129	\$99,387,835	\$31,293	60.6%
oct								\$30,626	59.5%

FIG. 9A Swap-Banchmark-for-Swap#19-xls

EXHIBIT 3 DETAILS

dec	22	\$0	-\$17,456	\$17,456		40	\$99,444,038	\$99,414,082	\$29,956	58.3%	l
jan	21	\$ 0	-\$16,698	\$16,698		39	\$99,456,589	\$99,427,308	\$29,282	57.0%	
feb	20	\$0	-\$15,937	\$15,937		38	\$99,469,205	\$99,440,601	\$28,604	55.7%	l
mar	19	\$0	-\$15,172	\$15,172		37	\$99,481,886	\$99,453,963	\$27,923	54.3%	
apr	18	\$0	-\$14,404	\$14,404		36	\$99,494,632	\$99,467,394	\$27,238	52.9%	ĺ
may	17	\$0	-\$13,633	\$13,633		35	\$99,507,444	\$99,480,895	\$26,549	51.3%	ĺ
jun	16	\$0	-\$12,858	\$12,858		34	\$99,520,322	\$99,494,465	\$25,857	49.7%	
jul	15	\$0	-\$12,080	\$12,080	1	33	\$99,533,266	\$99,508,105	\$25,161	48.0%	ĺ
aug	14	\$O	-\$11,299	\$11,299		. 32	\$99,546,277	\$99,521,816	\$24,462	46.2%	ı
sep	13	\$0	-\$10,514	\$10,514		31	\$99,559,355	\$99,535,597	\$23,759	44.3%	ĺ
oct	12	\$0	-\$9,726	\$9,726		30	\$99,572,501	\$99,549,449	\$23,052	42.2%	ı
nov	11	\$0	-\$8,934	\$8,934		29	\$99,585,714	\$99,563,373	\$22,341	40.0%	ĺ
dec	10	\$0	-\$8,139	\$8,139		28	\$99,598,996	\$99,577,369	\$21,626	37.6%	ĺ
jan	9	\$0	-\$7,341	\$7,341		27	\$99,612,345	\$99,591,438	\$20,908	35.1%	ĺ
feb	8	\$0	-\$6,539	\$6,539		26	\$99,625,764	\$99,605,578	\$20,186	32.4%	ı
mar	7	\$0	-\$5,734	\$5,734		25	\$99,639,252	\$99,619,792	\$19,460	29.5%	l
apr	6	\$0	-\$4,926	\$4,926		24	\$99,652,809	\$99,634,079	\$18,730	26.3%	l
may	5	\$0	-\$4,113	\$4,113		23	\$99,666,436	\$99,648,440	\$17,996	22.9%	l
jun	4	\$0	-\$3,298	\$3,298		22	\$99,680,134	\$99,662,875	\$17,258	19.1%	ı
jul	3	\$0	-\$2,479	\$2,479		21	\$99,693,902	\$99,677,385	\$16,517	15.0%	ı
aug	2	\$0	-\$1,656	\$1,656		20	\$99,707,741	\$99,691,969	\$15,771	10.5%	ı
sep	1	\$0	-\$830	\$830		19	\$99,721,651	\$99,706,629	\$15,022	5.5%	ı
oct	O	\$0	\$0	\$0		18	\$99,735,633	\$99,721,365	\$14,268	0.0%	ı
					•						

FIG. 98 Swap Benchmark for Swap#19.xls

- maturing TN/19/2005 vs CAT Bond 6:00% maturing way 2007 of the Correlation between Swap and Ratio Hedge Bond

		Bond Value	Mithy Change		129,152	3,885,065	272,117	-274,603	-2,210,463	96,940	-1,456,525	-699,973	1,216,906	446,704	506,935	-1,414,252	-1,972,825	600,266	697,408	260,544	-1,128,849	2,056,146	187,662	1,363,626	717,703	198,052
		Amort of	Premium		-0 004%	-0.004%	-0 004%	-0.004%	-0.004%	-0 004%	-0 004%	-0 004%	-0 004%	-0 004%	-0 004%	-0.005%	-0.005%	-0 005%	-0 005%	%900 0-	-0 005%	-0.005%	-0.005%	-0 005%	-0 005%	-0 005%
		Bond Price	Yield Unchanged	99 445%	99 450%	99 454%	99 458%	99 463%	89.467%	89.471%	99 476%	99.480%	99.485%	99 489%	%767 66 %767 66	99 498%	99 503%	86 507%	89 512%	99 516%	99 521%	99 526%	99 530%	99 535%	99 540%	99 545%
n		Effective	Swap Yield	*	6 0650%	6 6850%	6 6450%	6 6950%	7 0750%	7.2550%	7 5250%	7 6650%	7 4550%	7.3850%	7.5050%	7 7850%	8.1850%	8.0850%	7.9650%	8.0950%	8.3450%	7.9450%	7 9250%	7 6650%	7.5350%	7.5085%
		onstant Off.	Libor vs CP Swap	0 1000%	0 1000%	0.1000%	0 1000%	0 1000%	0 1000%	0.1000%	0.1000%	0 1000%	0 1000%	0.1000%	0 1000%	0 1000%	0 1000%	0 1000%	0 1000%	0 1000%	0 1000%	0 1000%	0 1000%	0.1000%	0 1000%	0 1000%
л.		onstant	Differential				0.8350%																			
8		ctual Libor	Swap Yleid	5 3500%	\$ 3300%	\$ 8500%	5.9100%	5.9600%	6.3400%	6.5200%	6.7900%	6 9300%	6.7200%	6.6500%	6 7700%	7 0500%	7 4500%	7 3500%	7.2300%	7.3600%	7 6100%	7.2100%	7 1900%	6 9300%	6 8000%	6 7745%
		Computed /	Sond Value	99 4455%	99 5789%	95 6981%	95 97 46%	95 7043%	93 4962%	92.5176%	91.0655%	90 3700%	91 5913%	82 0425%	91 4600%	90 05C3%	66 0820%	88 6868%	89 3888%	86 6326%	87 7086%	89 7694%	89 9617%	91 3301%	92 0525%	92.2553%
d (negative)			Months		8	33	26	%	8	ä	æ	83	2	8	28	8	78	8 8	22	2	22	23	.	8	79	82
- C-		Monthly Change	Adj. MTM		-\$68,239	-\$3,408,708	\$357,629	-\$259,530	-\$1,990,602	-\$746,465	-\$1,216,895	-\$355,584	\$892,891	\$296,725	-\$495,628	-\$1,206,120	-\$1,799,835	-\$288,265	\$428,607	-\$599,596	-\$762,874	\$1,785,803	\$182,683	\$960.979	\$720,165	\$76,061
9		Adjusted MTM Mo	(excl. sccrued int.)	S	-\$68,239	-\$3,476,946	-43,119,318	-\$3,378,848	-\$5,369,450	-\$6,115,915	-\$7,332,810	-\$7,668,394	-\$6,795,503	-\$6,496,778	-\$6,994,406	-\$8,280,526	-\$10,080,361	-\$4,067,186	-\$3,638,579	-\$4,238,174	\$5,001,049	-\$3,215,246	-\$3,032,563	-\$2,051,584	-\$1,331,419	-\$1,255,358
		Ad	Accrued Interest (excl.	2	8	8	2	8	æ	8	8	S	2	2	æ	3 .	2	\$23,671	¥7,64	\$29,068	-\$29,589	-\$96,959	-\$87,973	-\$93,151	\$115,315	-\$125,645
	Marton Yield		Acen		5.177%	5 795%	5.735%	5.780%	6.181%	6.349%	6.600%	6.690%	6.521%	6.475%	6.500%	6.893%	7.316%		Hunthehrel Market Vield	Source (Historical Yield	curve) - adjusted for the	no of months	a 3yr + 5 months.	Substract 10bp -	diff.between Libor & CP	
Settlement on		No of days of	accrued interest		5+21	2+20	5+19	5+18	5+17	5+16	5+15	5+14	5+13	5+12	5+11	5+10	9+6 9+6	\$			<u>\$</u>					 Æ
<u> </u>	Using CP at month and + 18 bps	Actual	floating rate															5.94%	6.11%	6.20%	6.58%	6.71%	8.67%	6.65%	8.99%	8.86% \$
	Actual month-end CP Rate																	5.76%	5.83%	6.02%	6.40%	6.53%	6.49%	8.47%	6.48%	6.48%

Swan Befferfinark for Swap#14 xls

	2	%0.0	99.4%	99.4%	89.5%	99.5%	99.4%	99.3%	98.7%	98.8%	%6.86 6.80	%6.86 6.86	%6.86 —	98.9%	95.0%	95.2%	95.1%	94.9%	96.1%	96.2%	96.4%	96.5%	28 5%
Square of	Unexplained Dev (Ineffect.portion) SSE	33,494,082,217	1,202,825,675	13,713,151,144	305,550,649	2,274,239,706	13,632,971,273	3,122,163,284	64,637,569,666	26,905,452,573	8,105,749,570	118,984,295	4,844,741,921	11,782,547,084	641,759,598,874	27,264,812,868	15,381,221,905	36,538,798,199	2,988,746,111	639,115,931	24,992,276,858	15,153,930,847	7 745 R51 707
Square of	<u>Total Deviation</u> <u>SST</u>	33,494,082,217	5,590,368,511,544	8,508,787,459,252	8,965,638,921,354	10,017,355,557,819	10,104,905,247,299	10,139,126,053,220	10,570,905,440,040	13,615,528,055,091	14,608,652,245,315	14,630,391,511,658	15,017,331,881,621	16,154,834,795,302	16,431,385,344,032	17,724,996,288,322	17,741,418,480,487	17,722,088,018,870	23,385,098,665,512	23,859,522,711,161	25,932,101,749,143	27,150,563,245,770	77 240 040 403 673
Ineffective	Sworth of sworth	7 minus X 183.014	-34,682	-117,103	17,480	47,689	-116,760	-55,876	-254,239	164,029	90,032	-10,908	69,604	108,547	801,099	165,121	124,021	-191,151				•	
>	Swap MTM Mthly Change	.\$68 239	.53 408 708	\$357,629	.\$259,530	-\$1,990,602	-\$746,465	-\$1,216,895	-\$355,584	\$892,891	\$296,725	-\$495,628	-\$1,286,120	-\$1,789,835	-\$288,265	\$428,607	965'665\$-	-\$762.874	\$1,785,803	\$182 683	8980 978	\$720,165	100 024
averg. x	Life-to-date Hedged Bond MTM mthly change	114 775	1 664 307	1,029,363	-832,535	-1,054,610	-1,022,713	-1,058,436	-1,002,359	-773,550	-657,520	-643,794	-691,521	-768,426	-676,907	-592,198	-584,909	-606 622	-476 747	-443 370	-364 248	-318 472	
×	Bond change 25)	317 711	000 077 0	3443,446	240,52	-1.942.913	-863.226	-1.272.771	-609.823	1,056,920	386,757	-506.536	-1 216 516	-1,591 287	512.834	593,728	475,575	924 028	4 731 133	1,731,133	4 430 060	507.084	100
	Compensatory <u>Hedge Ratio</u>	8	66.9%	% Q & & & & & & & & & & & & & & & & & &	88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	87 0%	87.6%	87.4%	87.1%	%6 98	86.6%	%E 3%	760 96	96 7%	85.4%	85 1%	98 8%	20 70					92.276
	Bond Value Mthly Change		\$129,152.26	.\$3,885,065.11	\$272,116 63	-\$274,603 02	-\$2,210,462.81 \$084.840.21	-8364,840.21	4500 072 65	41 216 905 ZN	£448 704 08	ecas 034 03	28 420 OOC#-	-\$1,414,251.55	19/2/024.01	\$600,200.30 \$697.408.08	#550 643 84	-\$300,043.01	-\$1,128,849.08	\$2,056,145.66	\$187,682.07	\$1,363,626.40	\$717,703.15
To Automatical Property of the			31-Jan-99			a br		•	<u>5</u>		•	100			Jan 2000		!	Jd a			<u>3</u> ,		

aug

23

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-\$17,962

8G swap#18 - maturing 7/15/2006 vs CAT Bond 7.25% maturing September 2009 Calculation of the Compensatory Hedge Ratio obtained by dividing Swap PV of 1BP by Bond PV of 1 BP 10 \$100,000,000 0.578% Swap Notional \$100,000 Bond (coupon interest rate): Bond (nominal): \$100,000,0 721000 Receive Rate Initial pay rate Adj. pay rate PV at Initial PV at Initial 6.578% 6.588% **Bond Yield Bond Yield** No.of Swap Swap No.of Compensatory eware of **Months** PV of Profit V of Adj. Profit PV of 1 BP **Months** 7.161% PV of 1 BP **Hedge Ratio** \$100,709,823 \$100,637,839 30-Sep-99 120 \$100,705,803 \$100,634,229 50 -\$54,921 \$54,921 \$71,574 76.7% \$0 -\$54,389 \$54,389 119 \$100,701,759 \$100,630,597 \$71,162 76.4% 81 oct -\$53,854 \$53,854 118 \$100,697,690 \$100,626,943 πον 80 \$0 \$70,747 76.1% \$100.693.598 \$100.623.268 79 \$0 -\$53.316 \$53,316 117 \$70,330 75.8% dec \$100,619,570 jan 2000 78 \$0 -\$52,775 \$52,775 116 \$100,689,481 \$69,911 75.5% 77 \$0 -\$52,231 \$52,231 115 \$100,685,340 \$100,615,851 \$69,489 75.2% feb 76 \$0 -\$51,684 \$51,684 114 \$100,681,174 \$100,612,110 \$69,065 74.8% mar 113 \$100,676,983 \$100,608,346 SO -\$51,134 \$51,134 \$68,638 75 74.5% apr \$50,580 112 \$100.672.768 \$100,604,559 \$68,208 may 74 SO -\$50,580 74,2% 73 \$0 -\$50,024 \$50,024 111 \$100 668 527 \$100,600,750 \$67,777 73.8% jun 72 \$0 -\$49,465 \$49,465 110 \$100,664,261 \$100,596,919 \$67,342 73.5% jul \$0 -\$48,903 \$48,903 109 \$100,659,969 \$100,593,064 \$66,905 73.1% 71 aug \$48,338 108 \$100,655,652 \$100,589,186 \$0 -\$48,338 \$66,466 sep 70 72.7% \$47,769 \$100,651,309 \$100,585,286 \$66,023 oct 69 50 -\$47,769 107 72.4% SO -\$47,198 \$47,198 106 \$100,646,940 \$100,581,362 \$65,579 72.0% nov 68 -\$46,623 \$46,623 105 \$100,642,546 \$100,577,414 \$65,131 dec 67 \$0 71.6% -\$46,045 \$46,045 104 \$100,638,125 \$100.573,443 \$64,681 71.2% ian 2001 66 50 65 \$0 -\$45,464 \$45,464 103 \$100,633,677 \$100,569,449 \$64,229 70.8% feb \$44,880 \$100,629,204 \$100,565,430 \$63,773 -\$44,880 102 70.4% 64 \$0 mar 63 \$0 -\$44,293 \$44,293 101 \$100,624,703 \$100,561,388 \$63,315 70.0% apr \$43,702 100 \$100,620,176 \$100,557,321 \$62,854 69.5% 62 \$0 -\$43,702 may SO -\$43,109 \$43,109 99 \$100,615,621 \$100.553,230 \$62,391 69.1% 61 ìun 98 \$100,611,040 \$100,549,115 \$61,925 \$0 -\$42,512 \$42,512 68.7% jul 60 \$100 544 975 97 \$100,606,431 \$61 456 68.2% 59 \$0 -\$41,911 \$41,911 aug 58 \$0 -\$41,308 \$41,308 96 \$100,601,795 \$100,540,811 \$60 984 67.7% sep 57 \$0 -\$40,701 \$40,701 95 \$100,597,131 \$100,536,621 \$60,510 67.3% oct -\$40,091 \$40,091 94 \$100,592,440 \$100,532,407 \$60,033 66.8% 56 \$0 nov 93 \$100.587.720 \$100,528,168 \$59.553 68.3% -\$39 477 dec 55 50 \$39,477 ian 54 \$0 -\$38,860 \$38,860 92 \$100,582,973 \$100,523,903 \$59,070 65.8% 53 -\$38,240 \$38,240 91 \$100,578,197 \$100,519,612 \$58,584 65.3% \$0 feb 90 \$100,573,392 \$100.515.297 \$58,096 so -\$37 616 \$37 616 64.7% mar 52 51 \$0 -\$36,989 \$36,989 89 \$100.568.559 \$100.510.955 \$57,604 64.2% apr -\$36,358 \$36,358 88 \$100,563,697 \$100,506,587 \$57,110 63.7% 50 \$0 may 87 \$100,558,806 \$100,502,194 \$56,613 49 \$0 -\$35,724 \$35,724 63.1% jun \$35,087 \$100,553,886 \$100,497,774 \$56,112 62.5% -\$35,087 86 iul 48 **S**0 \$34,446 85 \$100,548,937 \$100,493,328 \$55,609 61.9% aug 47 50 -\$34,446 46 \$0 -\$33,801 \$33,801 84 \$100.543,958 \$100,488,855 \$55,103 61.3% sep 83 \$100,538,950 \$100,484,356 \$54,594 60.7% 45 \$0 -\$33,153 \$33,153 oct -\$32,501 \$32,501 82 \$100,533,912 \$100,479,829 \$54.082 60.1% 44 \$0 nov 50 -\$31 846 \$31.846 81 \$100,528,843 \$100,475,276 \$53,567 59.5% dec 43 \$53,049 58.8% 42 \$0 -\$31,187 \$31,187 80 \$100.523,745 \$100,470,696 jan 41 \$0 -\$30,525 \$30,525 79 \$100.518.616 \$100,466,088 \$52,528 58.1% feb \$29,859 78 \$100,513,456 \$100,461,453 \$52,004 57.4% 40 \$0 -\$29,859 mar 39 \$0 -\$29,189 \$29,189 77 \$100,508,266 \$100,456,790 \$51,477 56.7% apr \$28,516 76 \$100,503,045 \$100,452,099 \$50,946 58.0% -\$28.516 38 \$0 may 75 \$100,497,793 \$100,447,380 \$50,413 55.2% \$27.839 37 50 -\$27 839 jun 54.5% 74 \$100,492,509 \$100,442,633 \$49,876 jul 36 50 -\$27,158 \$27,158 35 -\$26,474 \$26,474 73 \$100,487,194 \$100,437,858 \$49,336 53 7% aug 72 \$100,481,847 \$100,433,054 \$48,793 52.8% \$0 -\$25,786 \$25,786 34 sep 52.0% \$25,094 \$100,476,469 \$100,428,222 \$48,247 -\$25.094 33 oct \$0 51.2% 70 \$100,471,058 \$47,698 nov 32 ŝo -524,398 \$24,398 \$100,423,360 69 \$100,465,615 \$100,418,470 \$47,145 50.3% \$23,698 50 -\$23,698 dec 31 -\$22,995 \$22,995 68 \$100,460,140 \$100,413,551 \$46,589 49.4% 50 30 ian 48 4% \$22,287 67 \$100,454,632 \$100,408,602 \$46,030 feb 29 \$0 -\$22,287 -\$21,576 \$21,576 66 \$100,449,091 \$100,403,624 \$45,468 47.5% \$0 mar 28 65 \$100,443,517 \$100,398,616 \$44,902 46.5% \$20,861 27 \$0 -\$20.861 apr 45.4% \$44,333 26 50 -\$20,142 \$20,142 64 \$100,437,910 \$100,393,578 may 44.4% 25 \$0 -\$19,419 \$19,419 63 \$100,432,270 \$100.388.510 \$43,760 jun -\$18,692 \$18,692 62 \$100,426,596 \$100,383,411 \$43,185 43.3% **S**0 24 iul \$100,420,888 \$100,378,283 \$42,605 42.2% \$17,962

FIG. 12A Swaps Bencomans for Swaps 18 xls

EXHIBIT 4 DETAILS

\$0 \$0	-\$17,227	\$17,227	60	\$100,415,146	\$100,373,123	1 00000 1	
	440 400			4.00,710,170	a 100,373,123	\$42,023	41.0%
	-\$16,488	\$16,488	59	\$100,409,370	\$100,367,933	\$41,437	39.8%
\$0	-\$15,745	\$15,745	58	\$100,403,560	\$100,362,712	\$40,847	38.5%
\$0	-\$14,998	\$14,998	57	\$100,397,714	\$100,357,460		37.3%
\$0	-\$14,247	\$14,247	56	\$100,391,835	\$100,352,177	1 1	35.9%
\$0	-\$13,491	\$13,491	55	\$100,385,920	\$100,346,862	1	34.5%
\$0	-\$12,732	\$12,732	54	\$100,379,969		1	33.1%
SO	-\$11,968	\$11,968	53	\$100.373,984		1 1	31.6%
\$0	-\$11,201	\$11,201	52				30.1%
\$0	-\$10,429	\$10,429	51			: · · · I	28.5%
\$0	-\$ 9,653	\$9,653	50				26.8%
\$0	-\$8,872	•	49				25.1%
\$0	-\$8,088	1	48				23.3%
		1	l l				21,4%
		1					19.4%
		1	4				17.4%
		1	4				15.2%
		1					
		ł					13.0%
		! '	1 -				10.6% 8.2%
		1	1				1
				• •			5.6%
•							2.9% 0.0%
	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0

	Bond Value Mith Change 600,463 -1,503,827 -1,273,286 -2,320,774 636,338 1,027,407 -17,128 -1,501,434 -1,501,434	1,736,237 624,274 267,692
	Amort of Prentium 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000%	0.009%
	Bond Price	101 341% 101,323% 101,314%
n	Effective E 20x80 Yield IVIe 7.0510% 0.9617% 0.9617% 1.722% 7.7122%	7.4442% 7.1839% 7.0510% 7.0510%
n	Constant Diff. Libor vs CP Swap 0.1000% 0.1000% 0.1000% 0.1000% 0.1000% 0.1000% 0.1000% 0.1000% 0.1000%	0.1000% 0.1000% 0.1000% 0.1000%
	Constant d <u>Offerential</u> 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210% 0.3210%	0.3210% 0.3210% 0.3210% 0.3210%
92 82 83 84 84 84 84 84 84 84 84 84 84 84 84 84	Swap Yield Yield Signory 68300% 68300% 6.8300% 6.7487% 7.1488% 7.488% 7.2437% 7.2437% 7.2437% 7.373%	7.2232% 6.9629% 6.8700% 6.8300%
6L Girl Jan	Computed Bond Value 101 4250% 101 4250% 102 0173% 102 0173% 105 5054% 99 52238% 99 52238% 99 5524% 96 5847% 96 1644% 96 1644%	98.7125% 100.4401% 101.0556% 101.3145%
ond (confinal):	No. of Months 120 120 116 117 116 117 118 1116 1117 1118 1119 1117 1118 1117 1117 1117	011 001 001 001
7;	Adi. MTM 4di. MTM 533, 504 533, 508 51, 558 51, 558 527, 735 537,	\$213,760 \$1,215,951 \$705,980 \$194,508
er 2009	Adjusted MTM 200. accl. accruad Int.) 50 50 533.504 555 51.224.166 558 53.51.729.125 53.41.509 54.579.126 55.51.41.509 54.579.126 55.51.41.509 54.579.126 55.51.41.509 54.579.1279 55.51.41.509 54.579.1279 54.579	-\$2,402,537 -\$1,186,585 -\$480,605 -\$1,974,854
X :	Accrued Internation 10 to 10 t	\$0 \$0 \$0 \$125,224
5% matthring to Hedge Bon	AE178% 6.5778% 6.5278% 6.5277% 6.5277% 7.7278% 7.7286% 7.7286% 7.7286% 7.7286% 7.7286% 7.7286%	6.677%
AT-BOND 7-25 wap and Rat	No day of second citerat	108
SG Swap#18-matching 7/15/2086-vs CAL-Bond-7-25% matching-Beptent calculation of the Correlation between Swap and Ratio Hedge Bond hyperhetral Rate		%99 B
-matching f the Correls	CD Paie	6,48%
SG SWap#18-calculation of the Hypothetical Rate	Per Counterparty) Swep MIM 504 E 433,504 42,4158 43,381,203 43,4138 44,579,874	-\$2,616,296 -\$2,402,537 -\$1,186,585 -\$480,605 -\$2,100,078
	_ #1	73 77 70 88
# treples and the second secon	30-Sep-99 30-Sep-99 30-Sep-99	Jun 80p -2,169,362

FIG. 13

LUMBER OFFICE

		· •	<u>-</u>			100	0.7.07	57.76	%8.70	01.0%	86.2%	88.2%	88.2%	89.0%	83.5%	93.5%	94.3%	84.1%	94.1%
	Source of	Inexplained Dev	(ineffect, portion)	355	c	U 15 732 832 516	208 687 340 344	353 285 301 003	117 276 206 661	3 432 540 643	3,432,348,073	7,011,034,331	001,100,100	40 247 444 250	18,717,119,00	18,713,870,414	2,821,573,034	63,489,285,989	682,853
28	Square of	Total Deviation	ISS		•	63.478.928.851	504 676 712 291	2 076 897 321 496	4.269.888.798.888	5 705 816 121 978	6 891 153 721 126	6 931 508 772 406	7 419 392 361 062	12 899 803 490 559	42 004 400 044	10,091,439,805,805	14,979,915,613,565	15,564,479,116,344	15,614,017,438,151
	* Ineffective	Portion of	Swap MTM	(26-27) V minus X	C	125.431	-546.523	594.378	342.456	-58.588	166 767	-14.207	52 492	-138 627	136,700	66 / 001	53,118	-251,971	-826
2.1	, ,	Swap MTM	Mthly Change		9	\$333,504	-\$598,060	-\$1,559,611	-\$2,094,372	\$537,335	\$602.078	-\$634,859	-\$1,165,891	\$1.963.578	\$213.760	001,0134	168,612,14	\$705,980	\$194,508
	averg. x	Life-to-date	Hedged Bond	MTM mthly change.	0	229,467	-228,549	-412,720	-680,559	-487,342	-307,886	-350,534	-435,297	-209,272	-183 251	700 00	477'7Q-	-22,514	-7,071
26	×	Hedged Bond	ange	(24 • 26) M	0	458,935	-1,144,583	-965,233	-1,751,915	478,747	768,845	-649,066	-1,113,399	1,824,951	76.961	050 090 1	0/0'607'	454,010	193,681
-25		Compensatory	Hedge Ratio		76 7%	76.4%	76 1%	75 8%	75 5%	75.2%	74.8%	74.5%	74.2%	73.8%	73 5%	73 1%	20.00	6.7.7%	72.4%
24		Bond Value	Mthly Change		\$0.00	\$600,462.93	-\$1,503,626 62	-\$1,273,266 40	-\$2,320,774.27	\$636,938.08	\$1,027,406 66	-\$871,257.52	-\$1,501,434.31	\$2,472,573.07	\$104,775.02	\$1 736 237 04	\$6.74.079.00	4024,273.00	\$267,692.47
Exhibit 2					30-Sep-99			dec			mar			uní			9	<u>.</u>	_

FIG. 14

